Summary of Project Descriptions for Final Applications
Submitted for 2011 SRFB Grant Round

A. Knotweed Control Riparian Enhancement- Year 4

This project will take place to varying degrees on six river systems throughout the Hood Canal; the Union River, the Tahuya River, the Dewatto River and the Big and Little Quilcene Rivers, the Dosewallips, the Duckabush and Big Anderson Creek. Knotweed surveys extend to 50' above the ordinary high water line on each bank of each river. Because the uppermost extant of the knotweed in the watershed is to be found, the initial surveys for knotweed must cover the entire watershed. Knotweed treatment will take place at each location on adjacent parcels where knotweed is present and prioritized using the Prioritization of Treatment Areas section of the Hood Canal Regional Knotweed Control Strategy (page 5). Our primary objectives are: · to continue with our fourth year of assessment and treatment of knotweed where necessary in the Union and Dewatto and Big and Little Quilcene Rivers, · to continue our third year of knotweed control and assessment on the Tahuya River, · continue with the riparian plantings of native conifers and shrubs on the Union, Dewatto, Tahuya and Big and Little Quilcene Rivers, · to continue assessment and knotweed control efforts on the Dosewallips River, · and to begin control and assessment on the Duckabush River and Big Anderson Creek. Our secondary goal is to continue to educate the public about knotweed impacts on salmon habitat.

B. Union River Estuary Restoration

The Union river Estuary Restoration project is a straight restoration project based on the design funded by the SRFB in 2010. It is located at the mouth of the Union River in Mason County adjacent to Belfair and represents over 23% of the original Union/Lynch Cove Estuary The purpose of this project is to restore the estuary and tidal function to over 32 acres by breaching the existing dike in two locations, regrading to a variety of elevations, accommodations storm water drainage, replicating native estuarine habitat, primarily vegetated estuarine saltmarsh habitat necessary for juvenile endangered Hood Canal summer chum and Puget Sound chinook as well as coho, cutthroat trout. It is also designed to prevent flooding of surrounding property owners while accommodating continued recreational use of the existing trail system (IAC 1994) with pile supported walkways over the dike breaches. One 300 foot breach and another 100 foot breach will permit both salt and fresh water inundation and create maximum value for the scale of the project. Land use changes have been documented (LFA, 2003) and the Union river is identified as a tier 1 priority watershed S H R S, 2004) for habitat restoration.

C. Tahuya River LWD Placement Phase 2

This project will implement the projects in Reach 2 and 3 of the Lower Tahuya River Reach Assessment and Conceptual Large Woody Debris Placement Plan completed by The Watershed Company for SRFB grant #08-1995. In the Lower Avulsion Reach (#2), the rudimentary pool and riffle sequences present would benefit from the placement of log structures to accentuate these features. Placed wood would scour the existing pools deeper, scour additional pools, provide cover in those pools, and dissipate erosive

energy. Substrate materials displaced through pool scour would also tend to deposit along adjoining riffle habitats, thereby supplying them with spawnable substrate materials. Establishment of a vegetated riparian zone, even if initially relatively narrow, would be greatly beneficial for the Lower Avulsion Reach in terms of shading, bank stability, and the recruitment of large and small organic materials, including terrestrial insects as a food supply for fish. Resloping of vertical banks at select locations would be conducive to such riparian zone reestablishment as well as increasing channel capacity and providing a modest increase in floodplain function. In the Upper Avulsion Reach(#3), large wood is needed to provide cover for fish and provide scour action to maintain pools. Bank and riparian revegetation and re-establishment of flood plain function through channel widening is also needed. These actions will improve spawning and egg-incubating habitat for summer-run chum salmon and other salmonid species.

D. Skokomish Estuary Restoration Phase 3

This proposal is for the continuation of the Skokomish estuary "portfolio" restoration project, referred to as Phase III. It is located within the exterior boundaries of the Skokomish Indian Reservation, near the Great Bend of Hood Canal in Mason County. This proposal addresses hydrologic continuity from a forested wetland complex by opening barriers to stream flow and anadromous salmonids. Expected benefits to varied life history behavioral requirements of varied salmonid species and stocks. ESA-listed salmonids in the area include Puget Sound Chinook, Hood Canal summer chum, coastal bull trout and coastal steelhead, Other species expected to benefit are coho and pink salmon as well as cutthroat. Grant funds will support design, engineering, and construction of this project, anticipated for low-flow of summer 2012 and 2113 if necessary, with subsequent site re-vegetation as needed.

E. Skokomish River Floodplain Acquisition/Restoration

Additional discussions and support from the Skokomish Tribal Council have led to this pre-application submission being CO-SPONSORED by the Mason Conservation District and Skokomish Indian Tribe. This proposal identifies properties in the Skokomish River floodplain that are being investigated for acquisition and implementation of site-specific habitat conservation and restoration practices. The majority of the properties are identified on graphics and related spreadsheets. Other parcels in the floodplain of like values and similar characteristics may serve as proxy/alternative sites. Individual worksites refer to individual properties and as such have site-specific information provided. At this time of pre-appplication submission, certain properties identified as possible acquisitions are adjacent to properties owned by the Skokomish Tribe, WDFW, Green Diamond and /or Mason County. Other landscapes may provide match and leverage. Appraisals have been recently done for adjacent properties and may be utilized for these parcels when permission is secured to do so. Best professional judgment is providing an estimated range of values for these properties. Subsequent appraisals, surveying, title search and title insurance, and county assessor recordings are planned elements within this submission. Recent discussions have taken place with Mason County Public Works addressing options and scenarios for overall conservation, stewardship and management plans, and they have provided a letter of support, attached.

F. Lilliwaup Creek Restoration and 100% Design

The condition of Lilliwaup Creek's habitat limits the spawning and rearing success of ESA-listed summer chum (threatened) and other anadromous species. Stream flow, tidal influence, estuarine connectivity, and spawning range are impaired by gravel aggradation in the 0.7 mile anadromous reach, largely the result of the mass wasting event that brought thousands of yards of gravel downstream into the reach in 2007. Lack of riparian vegetation contributes to channel instability, reduces contribution of large woody debris, and reduces the amount of shade cover to cool the water and provide fish protection. Unmaintained culverts prevent access to side streams and pools. Upstream of the anadromous reach, some tributaries, roads and slopes remain unstable, with the potential for overburdening the creek with excess sediment. Local residents are concerned about the creek's condition and express interest in seeing it restored. Over 16 years and several hundred thousand dollars in supplementation efforts to recover the Lilliwaup summer chum population are at risk if these issues are not addressed. The proposed project would wrap up ongoing efforts by Long Live the Kings and our consultants to restore and protect the anadromous reach of Lilliwaup Creek. We have completed the assessment and preliminary project design (Project #09-1636) and are now proposing to finalize the design and implement slope stability improvements.

G. Lower Big Beef Creek Restoration Phase 1

Big Beef Creek is one of three watersheds which had subpopulations of summer chum salmon extirpated but recently reintroduced as a cornerstone strategy to recovering this federally-listed ESA species in Hood Canal. Habitat capacity in lower Big Beef Creek where summer chum salmon spawn, incubate, and rear is relatively poor given the stream straightening and simplification that occurred in 1969 and the removal of persistent woody debris. In addition, an access road on a raised foundation to a series of wells providing water for the UW's Fish Research Facility has not allowed the stream to passively recover from channel simplification, except when extreme flood events allow overtopping into a significant floodplain complex and 10+ acre wetland. The recently completed design phase, which was funded by SRFB in 2010, concluded that no action could result in a major avulsion, negatively impacting habitat. A stakeholder team considered several design alternatives and decided on a two phase project. Phase One includes minimizing the road prism, removing two old storage buildings and fill material, modifying the well access road, and reconnecting several side channels and wetlands. Phase Two (not included in this application) will install LWD structures. The project will allow Big Beef Creek to access more of its floodplain and open up more habitats which could benefit a diversity of species including ESA listed summer chum salmon and steelhead. (Refer to the preliminary engineering 30% design report in attachments.)

H. Dosewallips Floodplain and Estuary Restoration- 2011

The Dosewalips Floodplain and Estuary Restoration is a multi-phased project intended to restore ecological processes to the lower Dosewallips River and Delta. The project, entirely within Dosewallips State Park, was initiated in 2003 and has included levee and revetment removal as well as the construction of engineered log jams and the reestablishment of native forests. This application would fund the final phase of work in the lower river (below US-101) and would include the removal of over 1500 feet of

revetment and levee, the construction of 3 ELJs, and the decommisioning of a road and campsites currently located within the channel migration zone.

I. Big Quilcene River Habitat Restoration Phase 3

Phase 3 is a restoration project to restore the spawning habitat between MP 2.4 and MP 2.9 of the Big Quilcene River. During the last 30 years property owners have been grading the river channel to divert flood waters away from their properties. The manipulation of the river channel has resulted in approximately one half mile of the river being severely incised and devoid of spawning gravel. The restoration of this section of the River is critical to summer chum spawning. According to Thom Johnson of WDFW, this reach of river is at the upper boundary of the summer chum habitat. The construction phase of the restoration project has been ongoing for the last two years. Phase 1 of the project (2009) included adding three engineered log jams to a south side channel. The goal of this phase of the project was to add wood to the stream and improve fish habitat. A diversion structure was planned but was deemed unfeasible. Phase 2 of the project (2010) added more LWD to the north and south channels, removed several hundred feet of diking from the flood plain, and constructed several flood barrier structures for downstream properties. The habitat improvements made to the river in Phases One and Two performed well 2010 during flood events. However, the north channel of the river is still deeply incised and devoid of spawning gravel. Phase 3 of the project proposes to re-grade the upper "active" flood plain of the river between RMP 2.4 and 2.9 and to construct additional ELJs to help distribute the flow more evenly throughout the.

J. Big Quilcene Delta Acquisition

This project will acquire the parcels along the lower Big Quilcene River below Linger Longer Road and the estuary in order to allow floodplain and channel restoration. The goal of the project is to protect degraded habitat from further degradation and restore 3 acres of saltmarsh habitat identified in the 1883 USGS t-sheets and cosesquently filled for development. The objective of the project is to protect and restore degraded salmon refugia and habitat part of key ecological processes. After years of work, 19 contiguous parcels, making up approximately 19 acres of land have been identified for sale and conversion to permanent environmental conservatorship primarily on the south side of the river and adjacent to State and County land contiguous to the north. Appraisals have been completed and a fair market value has been determined. An inventory of buildings and infrastructure, and develop a preliminary restoration plan for part of the site and full restoration plann for 3 arcres of the site as well as costs to render the properties environmentally neutral has also been developed. Jefferson County and the citizens of the nearby town of Quilcene have been very active in supporting this and other similar local efforts

K. Lower Mainstem Chimacum Creek Acquisition

The Chimacum Creek estuary, just north of Irondale and Port Hadlock, is one of the least impacted estuaries on the Strait of Juan de Fuca and Hood Canal. Nestled into a deep forested ravine, lower

Chimacum Creek runs through the heart of the Port Hadlock's pending urban growth area of Jefferson County While platted in 2,500 square foot lots in the1880's, the existing forest corridor links together over a mile of core habitat area for Endangered Species Act listed summer chum, coho, steelhead and other depressed salmonid runs. This project site is part of a much larger effort to protect the lower mainstem of Chimacum Creek and the Chimacum Creek estuary. The project objective includes the fee simple purchase on one five acre property currently privately owned and for sale that will permanently protect the channel migration zone, the forested riparian buffer and the streambed for spawning summer chum and rearing habitat for coho salmon, steelhead and cutthroat. Chumsortium partners plan to conduct habitat enhancement activities, including plantings and road decommissioning to improve the spawning and rearing habitat values.

L. Maynard Nearshore Restoration

The Maynard Nearshore Restoration project goal is to restore 1,800 feet of marine shoreline to improve habitat conditions for multiple species, including migrating juvenile ESA listed summer chum salmon and spawning forage fish. Habitat improvements will begin with removal of early 1900's industrial fill, shoreline armoring, a creosote railway trestle and a defunct tide gate. Through removal of a portion of old railroad grade, a one acre pocket estuary will be created where now an artificially impounded freshwater pond exists. Two acres of beach, degraded by the presence of rip rap and paved with industrial fractured rock, will be cleaned up and re-graded to a natural slope using material suitable for forage fish spawning and shellfish recruitment.

M. Washington Harbor Restoration

The project will restore fish passage into 37 acres of estuary marsh and tide flats in WA Harbor, a 118-acre barrier estuary formed by Bell Creek and two spits - Gibson and South. The project will also restore tidal hydrology and habitat-forming processes within the 37 acres. Located in the Strait of Juan de Fuca near Sequim and adjacent to the entrance of Sequim Bay, the estuary lies 5 miles from Sequim Bay's Jimmycomelately (JCL) Creek, 7.5 miles from the Dungeness River, and 16 miles from Salmon and Snow Creeks in Discovery Bay. A 1,300-foot long roadway, equipped with just two 6-foot culverts, crosses the estuary and disrupts salmon access, tidal hydrology and habitat forming processes in WA Harbor's northern 37 acres. This area historically provided the finest tidal marsh and eelgrass habitat in the estuary. The impact of the roadway appears to have destroyed the eelgrass beds and evidence indicates that the estuary marsh has been deprived of sediment and is eroding. These problems will be corrected by removing the 6-foot culverts and 600 feet of roadway/dike and replacing them with a 600-foot bridge. Restoring unrestricted fish access and habitat processes will provide important benefits for summer chum - especially those originating from JCL Creek and possibly Discovery Bay - and Puget Sound Chinook. Other species that will benefit are coastal cutthroat, bull trout, and pink salmon.

N. Hood Canal Nearshore Fish Use Assessment

This request will fund 2 years of work examining juvenile salmonid habitat use patterns in the Hood Canal nearshore. The objective of the project is to refine the recovery strategy and project selection process for ESA listed stocks of Hood Canal summer chum and chinook salmon. The first year's work will focus on compiling existing data sources and literature to develop a well researched study plan as well as pilot sampling at expected sites. The second year's efforts would focus on collecting fish use data to develop an assessment of nearshore habitat usage by juvenile salmon. We would likely require 3-5 years worth of data to develop a complete picture of nearshore fish use in the Hood Canal, but would return to the SRFB for funding future years following this request to fund the initial 2 years.